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EXAMINER

DUONG, OANH L

ART UNIT PAPER NUMBER

2155

DATE MAILED: 12/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/702,196

Applicant(s)

SHAFFER ET AL.

Examiner

Oanh L. Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-62 are presented for examination.

Claim Objections

1. Claim 33 is objected to because of the following informalities: if “a replication flag” in line 7 implies to “a replication flag” in lines 4-5, “the replication flag” or “said replication flag” should be used. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 33 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The feature “receive from the first device original voice data in an **original packet containing a replication flag**” found no support by the specification.

Examiner respectfully requests applicants to specifically point out where in the specification supporting the above claimed feature.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-6, 8, 10, 14-16, 24-27, 30, 33-36, 43-48, 49, 51 and 54-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Schuster et al. (Schuster) (US 6,170,075 B1)..

Regarding claims 1, 24 and 43, Schuster teaches a method comprising:

a first device establishing a connection with a second device through a network according to a packet network communication protocol (col. 1 lines 41-47 and col. 12 lines 1-4);

the first device transmitting to the second device original voice data in original packets through the connection (col.12 lines 39-48);

generating redundant data by replicating the original voice data (col. 16 lines 10-14); and

adding at least some of the redundant data to the original packet. (Col.13 lines 18-47).

Regarding claim 33, Schuster teaches a retransmitting device for use in a network comprising a first device and a second device and operating according to a packet network communication protocol (Fig. 1), comprising a processor configured to:

receive from the first device original voice data in an original packet (col. 15 lines 28-30) containing a replication flag (i.e., **duplicating**/replicating packets of data **defined by said first data signal**, col. 16 lines 10-14);

transmit to the second device the original packet (col. 12 lines 39-48); and

generating redundant data by replicating the original voice data (col. 16 lines 10-14 and col. 16 lines 25-27), and transmit the redundant data to the second device (col. 12 lines 37-48).

Schuster discloses, "generating a first set of redundancy information comprises duplicating packets of data defined by said first data signal". A person of ordinary skill in the art will readily recognize that the replication flag must be set/defined in the first data signal, and determine whether a replication flag is set/defined must be performed in

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order for the packets to be replicated as defined by the data signal, and only a minimal amount of work to be required.

Regarding claims 2 and 44, Schuster teaches the first device generates the redundant data (i.e., network server 18, col. 13 lines 18-20).

Regarding claims 3, 25, 34 and 45, Schuster teaches the first device transmits at least some of redundant data in additional packets distinct from the original packets (col. 13 lines 48-56).

Regarding claims 4, 26, 35 and 46, Schuster transmitting the redundant data to the second device (col. 13 lines 18-20).

Regarding claims 5, 27 and 47, Schuster teaches determining whether a replication flag is set, and generating the redundant data only if the replication flag is set (col. 16 lines 10-14).

Regarding claim 8, Schuster teaches the first device generates the redundant data (col. 13 lines 18-20).

Regarding claim 49, Schuster teaches the first device generates the redundant data (col. 13 lines 18-20).

Regarding claims 6, 30, 36, 48 and 57, Schuster teaches monitoring an error rate of transmitting, and if the error rate of transmitting is higher than a threshold rate, setting the replication flag (col. 12 lines 13-25).

Regarding claims 10 and 51, Schuster teaches monitoring an error rate of transmitting, and if the error rate of transmitting is higher than a threshold rate, setting the replication flag (col. 12 lines 13-25).

Regarding claims 14 and 54, Schuster teaches a retransmitting device that is part of the connection receiving a next one of the original packets, and wherein if the replication flag is set, the retransmitting device generates next redundant data by replicating next original voice data included in the next original packet, and transmits the next redundant data to the second device (col. 16 lines 10-16).

Regarding claims 15 and 55, Schuster teaches the retransmitting device transmits the next redundant data in at least one additional packet distinct from the next original packet (col. 13 lines 48-56).

Regarding claims 16 and 56, Schuster teaches the retransmitting device imparts at least portion of the next redundant data in a second received original packet (col. 12 lines 37-48).

Regarding claim 17, Schuster teaches monitoring an error rate of transmitting, and if the error rate of transmitting is higher than a threshold rate, setting the replication flag (col. 12 lines 13-25).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster of Pandula (Pandula) (US 5,640,415).

Regarding claims 7 and 29, Schuster does not explicitly teach securing additional bandwidth.

Pandula, in the same field of endeavor, teaches securing additional bandwidth (col. 3 lines 5-16). Pandula teaches such securing additional bandwidth would enable voice data to be redundantly retransmitted and thereby providing improved bit error

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performance and guaranteed data (col. 2 lines 5-10). For this reason, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the securing additional bandwidth of Pandula in the process of generating redundant voice data in Schuster.

5. Claims 9, 21-23, 28, 40-42, 50 and 60-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster in view of Tsunoda (US 6,516,435 B1).

Regarding claims 9, 28, 40, 50, and 60, Schuster does not explicitly teach retransmitting device receiving a redundancy request; and in response to the redundancy request, setting the replication flag. However, Tsunoda teaches retransmitting device receiving a redundancy request, and in response to the redundancy request, setting the replication flag (e.g., see col. 24 lines 37-64 and col. 26 lines 22-49). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the redundant request in Schuster as taught by Tsunoda because such redundant request would enable the lost packets to be retransmitted. Thus, reliability of the transmission would be guaranteed

Regarding claim 21, Schuster does not explicitly teach retransmitting device receiving a redundancy request; and in response to the redundancy request, setting the replication flag. However, Tsunoda teaches retransmitting device receiving a

redundancy request, and in response to the redundancy request, setting the replication flag (e.g., see col. 24 lines 37-64 and col. 26 lines 22-49). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the redundant request in Schuster as taught by Tsunoda because such redundant request would enable the lost packets to be retransmitted. Thus, reliability of the transmission would be guaranteed

Regarding claims 22, 23, 41, 42, 61 and 62, Schuster-Tsunoda teaches the redundancy request is issued from the first/second device (Tsunoda, col. 24 lines 53-64).

6. Claims 11, 12, 18, 19, 31, 32, 37, 38, 52, 53, 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster in view of Dedrick (US 5,754,787).

Regarding claims 11, 31, 32, 37, 52 and 58, Schuster does not explicitly teach the first device transmits the original voice data through an associated first modem, and wherein the method further comprises determining a surplus bandwidth capacity of the first modem; and setting replication flag if the surplus bandwidth capacity is higher than a threshold. However, Dedrick teaches the first device transmits the original voice data through an associated first modem (e.g., see col. 12 lines 45-52), and wherein the method further comprises determining a surplus bandwidth capacity of the first modem, and setting replication flag if the surplus bandwidth capacity is higher than a threshold

(e.g., see col. 12 lines 38-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine determining surplus bandwidth capacity of the modem in Schuster as taught by Dedrick because such bandwidth capacity determination would ensure enough free bandwidth to provide high quality transmission of data. This would have increased the value of existing electronic distribution networks (Dedrick, col. 2 lines 41-42).

Regarding claims 12, 38, 53 and 59, Schuster teaches generating the redundant data (col. 13 lines 18-20). Schuster does not explicitly teach determined surplus bandwidth capacity. However, Dedrick teaches the determined surplus bandwidth capacity (e.g., see col. 12 lines 38-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the determined surplus bandwidth capacity in Schuster as taught by Dedrick because such the determined surplus bandwidth capacity would ensure enough free bandwidth to provide high quality transmission of data. This would have increased the value of existing electronic distribution networks (Dedrick, col. 2 lines 41-42).

Regarding claim 18, Schuster does not explicitly teach determining a surplus network bandwidth for transmitting the redundant data, and setting the replication flag if the surplus network bandwidth is higher than a threshold. However, Dedrick teaches, determining a surplus network bandwidth for transmitting the redundant data, and setting the replication flag if the surplus network bandwidth is higher than a threshold

(e.g., see col. 12 lines 38-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the determined surplus network bandwidth in Schuster as taught by Dedrick because such network bandwidth determination would ensure enough free bandwidth to provide high quality transmission of data. This would have increased the value of existing electronic distribution networks (Dedrick, col. 2 lines 41-42).

Regarding claim 19, Schuster teaches generating the redundant data (col. 13 lines 18-20). Schuster does not explicitly teach determined surplus network bandwidth. However, Dedrick teaches the determined surplus network bandwidth (e.g., see col. 12 lines 38-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the determined surplus network bandwidth in Schuster as taught by Dedrick because such the determined surplus network bandwidth would ensure enough free bandwidth to provide high quality transmission of data. This would have increased the value of existing electronic distribution networks (Dedrick, col. 2 lines 41-42).

7. Claims 13, 20 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster in view of Dedrick (US 5,754,787) in further view of Sidhu et al (Sidhu) (US 6,366,959).

Regarding claims 13 and 39, Schuster- Dedrick does not explicitly teach inputting a size of a jitter buffer; and setting a redundancy for generating the redundant data in

accordance with the inputted jitter buffer size. However, Sidhu teaches inputting a size of a jitter buffer; and setting a redundancy for generating the redundant data in accordance with the inputted jitter buffer size (e.g., see col. 20 lines 22-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the jitter buffer size in the combination of teachings of Schuster and Dedrick as taught by Sidhu because it was conventionally deployed in the art to maximize the quality of data stream for each of particular real time data application.

Regarding claim 20, the combination of teachings of Schuster and Dedrick does not explicitly teach inputting a size of a jitter buffer; and setting a redundancy for generating the redundant data in accordance with the inputted jitter buffer size. However, Sidhu teaches inputting a size of a jitter buffer; and setting a redundancy for generating the redundant data in accordance with the inputted jitter buffer size (e.g., see col. 20 lines 22-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the jitter buffer size in the combination of teachings of Schuster and Dedrick as taught by Sidhu because it was conventionally deployed in the art to maximize the quality of data stream for each of particular real time data application.

Response to Amendment

8. Applicant's arguments with respect to claims 1-62 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oanh L. Duong whose telephone number is (571) 272-3983. The examiner can normally be reached on Monday- Friday, 8:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

O.D
November 24, 2004


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER